Daily Diary Report by Bid Item

Contract No.: 04-0120F4
Diary #: 1244 **Const Calendar Day:** 817 **Date:** 30-Aug-2014 **Saturday**
Inspector Name: Brignano, Bob **Title:** Transportation Engineer
Inspection Type:
Shift Hours: **Break:** **Over Time:**
Federal ID:
Location:
Reviewer: Schmitt, Alex **Approved Date:** **Status:** Submit

04-0120F4
04-SF-80-13.2/13.9
Self-Anchored
Suspension Bridge

Weather

Temperature **7 AM** **12 PM** **4PM**
Precipitation **Condition** clear

Working Day ☑ If no, explain:

Diary: Dispute ☐

General Comments

CCO 314, SAMPLING AND TESTING A354 GRADE BD MATERIAL:

The status of the 2 test rigs in this current phase of the Townsend Test (Test IV) is as follows:
Rod 18 (Dry 2008 Rod, ID S1-A7, Bottom): Tensioned to 0.70 Fu Today
Rod 19 (Dry 2008 Rod, ID S2-H6, Bottom): Tensioned to 0.70 Fu Today

ABF Engineer Kelvin Chen is not at work; no ABF engineer is present for today's work. ABF superintendent John Perine's last day on the job was yesterday and new ABF superintendent James (Fish) Sturgeon is not at work; no ABF superintendent is present for today's work, but Sturgeon is on call. ABF's safety manager is not at work, but ABF safety staff Barry Rathman is available offsite and is on call for today's work in the event of any safety issues.

There is work in the field for the scheduled jacking step at TR's 18 & 19. There is no other work by ABF today on site, with work today specifically because of CCO 314. The jacking step is not scheduled to happen until after the morning break (which starts at 0900), so that the morning data reports can be produced and evaluated and to keep the load step durations consistent. Ironworker Foreman Jared Garret (temporary foreman for the day) and Ironworker Jonathan Canites start work at 0600 and are done after 1000 – by union agreement they are paid 6 hours after working 4 hours. Today is Saturday, so the work is paid at 1.5x OT.

VGO is on site today for the jacking step at TR's 18 & 19. From VGO, Dave Van Dyke starts work on site at ~0800. He works on the morning data reports before this morning's scheduled tensioning step. VGO is present for live data display during the jacking step at the test rigs. Then, VGO works on the data reports from the jacking step at the test rigs. VGO leaves the site ~1030. At the end of the day, VGO produces and sends the pm data reports.

In the morning, prior to the jacking step, the ironworkers are working on other CCO operations. They start the day by dismantling one of the two older tent frames that are unused in the current setup. This involves removing the 1/4" hardware that is securing the tent frame pieces to each other and then placing all the parts on a pallet. Then, they do the same work on the second of the two older tent frames that are unused in the current setup. After completing the work on the two tent frames, they move various pallets of material in the areas to the west and south of the test rigs. Included in this work is a pallet of 12x12's and a pallet of sandbags to the west of the test rigs that need to moved to other areas where all the other timber or sandbags are being stored.

For the jacking step at the 2 test rigs, present from the DJV is Hayat Tazir. Present from CT-METS for AE

is Saied Khan (communicate with Mistras personnel offsite). Two ABF ironworkers are present to operate the hydraulic pump, tighten the nut, and deal with any issues that may come up during the jacking operation, with VGO present to monitor the loads being used to guide the operations.

Test Rig #18 (Dry 2008 Rod, ID S1-A7, Bottom) Jacking Step:
This is the 7th jacking step and the rod is being jacked to 0.70 Fu. The post-seating of the nut target is 585.060 +10/-0 kips. The expected hydraulic pressure at this locked off force is 4,200 psi. Based on the previous jacking step (8/28/2014 - 0.65 Fu), the expected seating loss is at least 41 kips (plus some expected bleed loss during AE check), so the initial jacking target is ~630~640 kips. The tension on the rod at the start of the operation is 549 kips (the 0.65 Fu load left on the rod 2 days ago was 548 kips for a delta of +1 kip, with this tension difference possibly due to thermal differences between 8/28/2014 and today). Jacking is started at 0924. At 4,200 psi hydraulic pressure per the dial gauge, the primary strain gauges give a force of 587 kips. The hydraulic pressure is increased to 4,600 psi and the primary strain gauges give a force of 606 kips. The hydraulic pressure is increased to 4,800 psi and the primary strain gauges give a force of 632 kips. The AE is checked with the ok given at 0927. The nut is tightened. Prior to bleeding off the jacks, the primary strain gauges give a force of 630 kips (bleed loss = 2 kips). After bleeding off the jacks, the primary strain gauges give a force of 586 kips (seating loss = 44 kips). The force is within the specified tolerance.

Test Rig #19 (Dry 2008 Rod, ID S2-H6, Bottom) Jacking Step:
This is the 7th jacking step and the rod is being jacked to 0.70 Fu. The post-seating of the nut target is 585.060 +10/-0 kips. The expected hydraulic pressure at this locked off force is 4,200 psi. Based on the previous jacking step (8/28/2014 - 0.65 Fu), the expected seating loss is at least 42 kips (plus some expected bleed loss during AE check), so the initial jacking target is ~630~640 kips. The tension on the rod at the start of the operation is 551 kips (the 0.65 Fu load left on the rod 2 days ago was 551 kips for a delta of 0 kips). Jacking is started at 0930. At 4,200 psi hydraulic pressure per the dial gauge, the primary strain gauges give a force of 582 kips. The hydraulic pressure is increased to 4,600 psi and the primary strain gauges give a force of 607 kips. The hydraulic pressure is increased to 4,800 psi and the primary strain gauges give a force of 631 kips. The AE is checked with the ok given at 0934. The nut is tightened. Prior to bleeding off the jacks, the primary strain gauges give a force of 628 kips (bleed loss = 3 kips). After bleeding off the jacks, the primary strain gauges give a force of 584 kips (seating loss = 44 kips). This is not within tolerance – force is low by ~1 kip from the minimum target, so another jacking step is needed. At 4,800 psi hydraulic pressure per the dial gauge, the primary strain gauges give a force of 632 kips (1 kip higher). The AE is checked with the ok given at 0937. The nut is tightened. Prior to bleeding off the jacks, the primary strain gauges give a force of 632 kips (bleed loss = 0 kips). After bleeding off the jacks, the primary strain gauges give a force of 590 kips (seating loss = 42 kips). The increase of 6 kips is from 1 kip higher jacking force, 3 kips less bleed loss, and 2 kips less seating loss. The force is within the specified tolerance.

A 40kW generator – MQ Power 40 – ABF ID 002051 is used briefly for the jacking operations and is on idle/standby at the test rig work area the remainder of the day. A Hydraulic Pump for running the jacks is used briefly for the jacking operations and is on idle/standby at the test rig work area the remainder of the day. A Kubota Cart is used by the ironworkers. A Hyster 80 forklift (ABF ID 002306) is used by the ironworkers at various times.

Note that there is k-rail at this work area. All the remaining k-rail at the CCO 314 test rig site is State owned. There are 20 pieces of 10' bought k-rail. Of the 20 pieces, 16 are installed in test rigs and 4 are spare/extra k-rail that are set aside.

To elevate k-rail and sandbags, crane mats (built from 12x12's) and timber blocking (12x12's) are used. The crane mat and 12x12's quantities are as follows:
1 each 4'x20' crane mat (1 x 80 LF)
1 each 5'x19' crane mat (1 x 95 LF)
2 each 5'x20' crane mats (2 x 100 LF)
2 each 5'x16' crane mat (2 x 80 LF)
~64 LF additional 12x12's

Total 12x12's quantity = 599 LF ~ 600 LF

The agreed extra work with ABF is as follows:
Ironworker Foreman Jared Garrett - 6 hrs OT
Ironworker Jonathan Canites - 6 hrs OT
Hyster 80 Forklift - 1 hr OT
40 kW Generator - 0.5 hr OT
12x12 timber - 600 LF
See the attached Extra Work Order - Signed with ABF for CCO 314 work

INSPECTOR OT REMARK:

Office and Field 6 hours: I am at work 0600 and 1230 for the scheduled test rod tensioning step in the field and for other office work. ABF works in the field and I am in the field between 0600 and ~1000+. I am then in the office for various work related to A354 Grade BD bolts and rods, including reviewing the VGO and CT-METS data from the test rigs. ABF's shift is 0600 to 1030 (but paid 6 hours per union agreement), and my shift and OT hours are 0600 to 1230.